

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-277/88-11
50-278/88-11

Docket No. 50-277
50-278

License No. DPR-44 Category C
DPR-56

Licensee: Philadelphia Electric Company
2301 Market Street
Philadelphia, Pennsylvania 19101

Facility Name: Peach Bottom Units 2 and 3

Inspection At: Delta, PA

Inspection Conducted: April 11-15, 1988

Inspectors: T. Dragoun 5/12/88
T. Dragoun, Senior Radiation Specialist date

Approved by: R.L. Nuntz for 5/18/88
M. Shanbaky, Chief Facilities Radiation Protection Section date

Inspection Summary: Inspection on April 11-15, 1988 (Combined Report Nos. 50-277/88-11 and 50-278/88-11)

Areas Inspected: Routine, unannounced inspection of the radiation safety program including status of previously identified items, air sampling program, ALARA, a worker allegation, recirc pipe replacement project changes, and status of HP program upgrades.

Results: No violations were identified.

Details

1.0 Persons Contacted

1.1 Licensee Personnel

J. Franz, Manager - PBAPS
M. Cassada, Corporate Director of Radiation Protection
J. M. Pratt, PBAPS Manager - Quality
D. LeQuia, Superintendent - Plant Services
T. Cribbe, Regulatory Engineer
W. Rogers, Nuclear Training
D. Potocik, Senior Health Physicist

1.2 NRC Personnel

T. Johnson, Senior Resident Inspector
R. Urban, Resident Inspector

The above personnel attended the Exit Interview on April 15, 1988. Additional personnel were contacted or interviewed during the course of this inspection.

2.0 Purpose

The purpose of this routine inspection was to review the licensee's radiation protection program with respect to the following elements:

- Status of Previously Identified Items
- Air Sampling
- ALARA
- Worker Allegation
- Changes in Recirc Pipe Replacement Project
- HP Program Upgrades

3.0 Status of Previously Identified Items

- 3.1 (Closed) Follow Item (88-07-01) Provide a calibration procedure for IR portal radiation monitors. Procedure TL-12-00535 was issued on 3/2/88 to provide a detailed calibration procedure.
- 3.2 (Closed) Follow Item (86-02-04) Review radiological controls in admin building hot shop. There are now administrative controls that limit the radiation level and contamination level on items sent to the hot shop. This eliminates the need for special storage facilities. The radiologically controlled area was reduced in size

so that the drinking water fountain is now in a clean area. Video monitors are installed to allow the duty technician to check the status of the HEPA air filters in the building exhaust system.

- 3.3 (Closed) Follow Item (87-07-07) Improve timeliness of analysis of air samples and response to naturally occurring airborne activity. The sample count time was reduced from 10 to 2 minutes while maintaining adequate minimum detectable activity. This reduced turnaround time. Procedure HP-214 "Air Sample Analysis and Evaluation" issued 9/5/87 includes instruction for checking samples for naturally occurring activity.
- 3.4 (Closed) Unresolved Item (87-26-02) Finalize implementation of a hot particle program. Procedure HP-212 " Hot Particle Detection and Control" was issued on December 20, 1987. All HP technicians were trained in the identification, hazards, controls and procedures for hot particles. The General Employee training was also revised to include a discussion of hot particles.
- 3.5 (Closed) Unresolved Item (87-38-01) RWP's lack specificity. All PRPG-RWP were terminated or rewritten to be job specific on or before December 30, 1987. Procedure HP-310 for RWP's was revised and directed technicians to include specific information to workers in regards to the jobs covered and the radiological conditions.

4.0 Routine Air Sampling

The licensee's program for routinely evaluating the airborne activity in accessible areas of the plant was reviewed with respect to criteria contained in:

- 10 CFR 20.103 Exposure of individuals to concentrations of radioactive materials in air in restricted areas.
- 10 CFR 20.201 Surveys
- Station Procedures HP-213, HP-214, HP-426, HP-427, HP-428 and HPO/CO-3a.

The licensee's performance relative to these criteria was determined from interviews with supervisors and technicians, in-plant tours and a review of selected records. Within the scope of this review no violations were observed.

The licensee relies on low volume air samples (at 1 CFM) and portable continuous air monitors (CAM). These were placed in critical areas of the plant to monitor airborne activity levels. The inspector informed the licensee that the CAM did not display calibration dates or alarm settings. The licensee stated that the old style CAM were becoming difficult to maintain and calibrate. These CAM will be replaced with newer Eberline AMS-3 as soon as new moveable carts arrive which is estimated to be

mid-May 1988. This matter will be reviewed on completion (88-11-01). The licensee has already selected 10 critical locations in-plant for the new CAM. In addition, specialized air monitoring equipment purchased for the Unit 3 pipe replacement outage will become available for general use throughout the plant on project completion.

Use of low volume samplers for general area air samples was determined to be adequate. The licensee uses breathing zone air samplers on workers involved in airborne activity generating jobs.

The licensee's air sampling program is generally adequate. The licensee self-identified weaknesses several months ago and has taken steps to improve the equipment and procedures. This program will be reviewed again in a future inspection.

5.0 ALARA

The licensee's ALARA program was reviewed with respect to the criteria contained in:

- 10 CFR 20.1
- Regulatory Guides 8.8 and 8.10
- Station Procedures HP-302, HP-303, HP-308, and HP-309

The performance of the ALARA program was determined from:

- Review of documents titled "1988 Exposure Goal Revision" and "Exposure Reduction Program"
- Discussions with supervisors and technicians
- Observing a Station ALARA Review Committee (SARC) meeting on 4/12/88 and a Radiological Engineering Staff Meeting on 4/13/88.
- Discussions with managers in a newly formed Outage Planning organization.

Within the scope of this review no violations were observed. The licensee's ALARA program continues to exhibit major weaknesses. For example, of the 17 members of the SARC committee, only 4 attended the 4/12/88 meeting. During the meeting, two significant issues were raised. The first issue, from the Maintenance Department, suggested that outage exposure could be significantly reduced if steps were taken to prevent damage to mirror insulation in the Drywell. This pipe insulation is frequently damaged by nearby work or damaged by improper removal of the insulation. Repairs to this insulation frequently result in high exposure, due to the high radiation levels in the area. The Maintenance job leader proposed that outage planning schedule all mirror insulation removal and only allow trained workmen to remove it. The second issue

was raised by the Radwaste Department which reported unnecessary exposures caused by highly radioactive trash being placed in low level waste receptacles. The inspector noted that the licensee received a recent violation from the NRC on a related matter. The Radwaste job leader proposed that control point technicians assist in keeping high and low level radwaste separated and that more physical space be allocated for trash sorting.

The inspector noted that discussions on these excellent proposals was minimal and less than enthusiastic. Action was postponed to a future meeting in hopes that attendance would improve. During the Exit Interview the Plant Manager directed that all SARC members and all Superintendents must attend the next regularly scheduled meeting.

The Plant Manager stated that he will speak to the SARC members to emphasize the importance of the committee activities.

Some potentially positive developments were noted by the inspector. The licensee has instituted a high level Outage Planning department. The increased attention to work planning and coordination may allow ALARA to be effectively incorporated into the planning process. However, the ongoing outages only allow planning with short lead time. In addition, the licensee is evaluating various ALARA initiatives instituted on the PRPG project for site-wide use. These initiatives include an ALARA Awareness Program with rewards to employees for ALARA suggestions.

6.0 Worker Allegation

On April 4, 1988 the NRC received an allegation from a worker stating that a contractor supervisor was directing people to stay in radiation areas unnecessarily. The inspector reviewed the alleged's exposure records and records of his entries into radiologically controlled areas. In the three month period of January, February and March 1988 the alleged made 87 entries resulting in no exposure and 25 entries with a total of 310 millirem (about 12 mrem per entry) exposure. The specific area mentioned in the allegation is generally not a radiation area. On the basis of these facts, the inspector stated that this allegation was not substantiated.

However, the inspector discussed with the licensee the need for contractor supervision to be receptive to worker concerns. The Plant Manager stated that all contractor management on site were recently counseled on being receptive to safety concerns and that this message would be reinforced again in the next few weeks. The inspector had no further questions.

7.0 Pipe Replacement Project Group (PRPG)

The status of the recirc pipe replacement project on Unit 3 was reviewed through discussions with selected personnel and a review of selected records.

The licensee recently terminated the contractor (GE) personnel who provided overall supervision of HP activities at PRPG. The inspector reviewed the qualifications of the replacement radiation protection manager and determined that ANSI requirements specified in Technical Specifications are satisfied. The operating staff and line supervisors remain unchanged.

The project continues to proceed on schedule with no major radiological problems. The estimated exposure at project completion is being revised downward to about 1600 man-rem. This is well within the NRC guideline of 2000 man-rem.

8.0 HP Program Upgrades

The licensee has hired a group of HP contractors to upgrade the site HP program. The inspector interviewed members of this group to determine the status of these activities. The projects and their status are as follows:

- 1) Commitment to Excellence plan category II items are 75% complete.
- 2) A computerized access control program will be implemented this summer.
- 3) The HP procedures that affect all personnel onsite have been placed in draft Administrative procedures. These are targeted for site-wide distribution in mid May 88.
- 4) With the formation of an improved and enlarged training department, the GET, GRT, and HP technician programs will be revamped by July 88. Re-accreditation of these programs by INPO is being sought.
- 5) All previously identified HP items in NRC inspection reports will be resolved prior to restart.

The licensee stated that all HP program upgrades in addition to those mentioned above will be complete by September 1988.

9.0 Exit Interview

The inspector met with the personnel denoted in section 1.0 at the conclusion of the inspection on April 15, 1988. The scope and findings of the inspection were discussed at that time.